

**National Climatic Data Center**

**DATA DOCUMENTATION**

**FOR**

**DATA SET: 3852 (DSI-3852)**

**Summary of the Day (CDMP)**

**February 1, 2005**

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**1. Abstract:** This Summary of the Day data file (DSI-3852) contains daily selected elements of observations recorded by certified observers. The stations were located in the U.S. and were operated by the United States Weather Bureau (later the National Weather Service) and the Federal Aviation Administration (FAA). This data file spans 1945-1948. These first and second order stations were usually fully instrumented and therefore recorded a complete range of meteorological parameters. The observations were generally recorded for the 24-HR period midnight to midnight.

There are a total of 169 stations with recorded observations in this dataset. Stations have varying periods of record and varying types of data elements. In the early years of aviation most stations were located in major cities. As aviation became more sophisticated, stations shifted to airports.

Official surface weather observation standards can be found in the Circular N manuals. The images are available on a web based system, Web Search Store Retrieve Display (WSSRD) and will eventually be accessible through NCDC's On-Line store.

**2. Output Keying Format Names and Definitions:**

The keying format listed below was developed and used to key the various elements from the Summary of the Day Observations for 1945-48.

**SUMMARY OF THE DAY 1945-1948**

(Revised March 28, 2002)

Data Records	Contents	Instructions
1-5	WBAN Number	Auto filled from NCDC WBAN list
6	,	Comma delimited
7-10	Year	e.g. 1945
11	,	Comma delimited
12-13	Month	right justify, blank fill e.g. 01 = January 02 = February . . 12 = December

14	,	Comma delimited
15-16	Day	right justify, zero fill e.g. 01, 02, ...31
17	,	Comma delimited
18-21	24 Hour Maximum Temperature	See breakout below
18	Sign Field	If (+) leave blank. If negative code (-)
19-21	24 Hour Maximum Temperature Value (Whole Degrees Fahrenheit)	right justify, blank fill e.g. if entry is 86 Positions 18 = blank Positions 19 = blank Positions 20-21 = 86
22	,	Comma delimited
23-25	24 Hour Minimum Temperature	See breakout below
23	Sign Field	If (+) leave blank. If negative code (-)
24-25	24 Hour Minimum Temperature Value (Whole Degrees Fahrenheit)	right justify, blank fill e.g. if entry is - 6 Position 23 = - Position 24 = blank Position 25 = 6
26	,	Comma delimited
27-30	24 Hour Precipitation	right justify, blank fill. Keyed to inches and hundredths, decimal implied. e.g. if entry is 0.17

		Positions 27-28 = blank Positions 29-30 = 17 e.g. if entry is T Positions 27-29 = blank Position 30 = T
31	,	Comma delimited
32-34	24 Hour Snowfall	right justify, blank fill. Keyed to inches and tenths, decimal implied. e.g. if entry is 10.1 Positions 32-34 = 101 e.g. if entry is T Positions 32-33 = blank Position 34 = T
35	,	Comma delimited
36-38	Snow Depth	right justify, blank fill Keyed to whole inches. e.g. if entry is 40 Position 36 = blank Position 37 = 4 Position 38 = 0  e.g. if entry is T Position 36-37 = blank Position 38 = T
39	,	Comma delimited
40-43	Maximum 5 Minute Wind (M.P.H. or Knots)	See breakout below
40	Speed (Units Indicator)	If M.P.H. =1. If Knots =2 If M.P.S. = 3. Unit indicators 1, 2 & 3 represent Maximum 5 Minute Wind Speed (Positions 41- 43) and 5 Minute Direction (Positions 45-47) values. If M.P.H. = 4. If Knots = 5. If M.P.S. =

		6. Unit indicators 4, 5 & 6 represent Average Wind speed (Positions 41-43) and Prevailing Wind Direction (Positions 45-47) values.
41-43	Maximum 5 Minute Wind Speed Value	right justify, blank fill e.g. if entry is 5 knots Position 40 = 2 Positions 41-42 = blank Position 43 = 5 e.g. if entry is 57 m.p.h. Position 40 = 1 Position 41 = blank Positions 42-43 = 57
44	,	Comma delimited
45-47	Maximum 5 Minute Wind Direction	16 point scale as follows: N NNE NNW NE ENE E ESE SE SSE S SSW SW WSW W WNW NW e.g. if entry is WSW Positions 45-47 = WSW
48	,	Comma delimited
49-52	Time of 5 Minute Maximum Wind	e.g. 0448 Local Standard Time (LST). Times represent 24 hour clock. e.g. if entry is 0448

		Positions 49-52 = 0448
53	,	Comma delimited
54-57	Fastest Mile Wind Speed (M.P.H. or Knots)	See breakout below
54	Speed (Units Indicator)	If M.P.H. = 1. If Knots = 2 If MPS = 3
55-57	Fastest Mile Wind Speed Value	right justify, blank fill e.g. if entry is 46 knots Position 54 = 2 Position 55 = blank Position 56 = 4 Position 57 = 6 e.g. if entry is 32 m.p.h. Position 54 = 1 Position 55 = blank Positions 56-57 = 32
58	,	Comma delimited
59-61	Fastest Mile Wind Direction	Same rules for 16 point wind scale as 5 Minute Maximum Wind Direction listed above (Positions 45- 47)
62	,	Comma delimited
63-66	Time of Fastest Mile Wind	e.g. 1210 Local Standard Time (LST). Times represent 24 hour clock. e.g. if entry is 1210 Positions 63-66 = 1210
67	,	Comma delimited
68-71	Wind Peak Gust (M.P.H. or Knots)	See breakout below
68	Speed (Units Indicator)	If M.P.H. = 1. If Knots = 2. If MPS = 3.

69-71	Wind Peak Gust Value	right justify, blank fill e.g. if entry is 31 m.p.h. Position 68 = 1 Position 69 = blank Positions 70-71 = 31 e.g. if entry is 9 knots Position 68 = 2 Positions 69-70 = blank Position 71 = 9
72	,	Comma delimited
73-75	Peak Gust Wind Direction	left justify and blank fill. Same rules for 16 point wind scale. 5 Minute Maximum Wind Direction listed above (Positions 45-47).
76	,	Comma delimited
77-79	Thickness of Ice On Water      Keyed to tenths of inches, decimal implied.	right justify, blank fill e.g. if entry is 12.7 Position 77 = 1 Position 78 = 2 Position 79 = 7
80	,	Comma delimited
81-82	Top of Frozen Ground Layer	right justify, blank fill Keyed to whole inches. The depth below the surface of the ground at which frozen ground is first struck. Listed as follows: Ground frozen from <u>top</u> in. to <u>base</u> in. e.g. if entry is 12 Position 81 = 1 Position 82 = 2
83	,	Comma delimited

84-85	Base of Frozen Ground Layer	right justify, blank fill The depth below the surface of the ground at which frozen ground is last struck. Listed as follows: Ground frozen from <u>top</u> in. to <u>base</u> in. Keyed to whole inches. e.g. if entry is 5 Position 84 = blank Position 85 = 5
86	,	Comma delimited
87-89	River Gage	right justify, blank fill Keyed to tenths of feet, decimal implied. e.g. if entry is 75.9 Position 87 = 7 Position 88 = 5 Position 89 = 9

Notes:

1) Whenever an element field has a value to be keyed, but the value cannot be determined because of illegibility or non-recognizable characters by the keyer then place a tilde (~) in the last position of that element field. This will provide the data user with information that an entry was made by the observer but could not be keyed. If sufficiently interested the user can view the image.

3. **Start Date:** 1945
4. **Stop Date:** 1948
5. **Coverage:** U.S. Weather Stations in the contiguous 50 states.

6. **How to Order Data:**

Ask NCDC's Climate Services about costs to obtain this data set.  
Phone: 828-271-4800  
FAX: 828-271-4876  
E-mail: [NCDC.Orders@noaa.gov](mailto:NCDC.Orders@noaa.gov)

7. **Archiving Data Center:**

National Climatic Data Center  
Federal Building  
151 Patton Avenue  
Asheville, NC 28801-5001

**8. Technical Contact:**

National Climatic Data Center  
Federal Building  
151 Patton Avenue  
Asheville, NC 28801-5001  
Phone: 828-271-4800

**9. Known Uncorrected Problems:** No known problems. Errors were corrected or eliminated by quality control software. During the keying process if a value was entered on the form, but the keyer could not read the handwriting then a tilde (~) was placed in the element field. Where possible these entries should be corrected.

**10. Quality Statement:** Data have undergone extensive automated quality control using limits, internal and temporal checks, provided by the Northeast Regional Climate Center (NRCC) and additional manual quality control at the National Climatic Data Center (NCDC).

**11. Essential Companion Datasets:** The NCDC in-house station history files (DSI-9767) would be essential in correcting location (WBAN Number) errors. Many of the values could be compared to other NCDC databases to insure the correctness of the values.

**12. References:**

"Graybeal\_2004": Graybeal, D. Y., 2004: Relationships among daily mean and peak gust wind speeds: Reanalysis for application to data quality assurance. Submitted to Int. J. Climatol., conditionally accepted.